



RPS Procurement Reporting & Verification under SB X1-2

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California's Renewables Portfolio Standard



Path to 33 Percent by 2020 RPS Legislation

- Original RPS signed into law in 2002
 - Required CPUC-regulated retail sellers to procure 20% renewable energy by 2017.
 - 2006 Legislation accelerated the RPS to 20% by 2010.
 - Publicly owned utilities to set their own RPS goals recognizing the intent of the legislature to attain a target of 20% of California retail sales of electricity from renewable energy by 2010.
- In April 2011, Governor Brown signed SB X1-2, which set a new target of 33% renewables by 2020 for all utilities.
- Energy Commission and CPUC staff are coordinating on each agency's roles for verification – the focus of this presentation is on the verification process necessary for the Portfolio Content Categories (PCCs).



33% RPS by 2020 Compliance Periods



SENATE BILL X1-2

Retail sellers and POU's are to meet these RPS procurement goals:

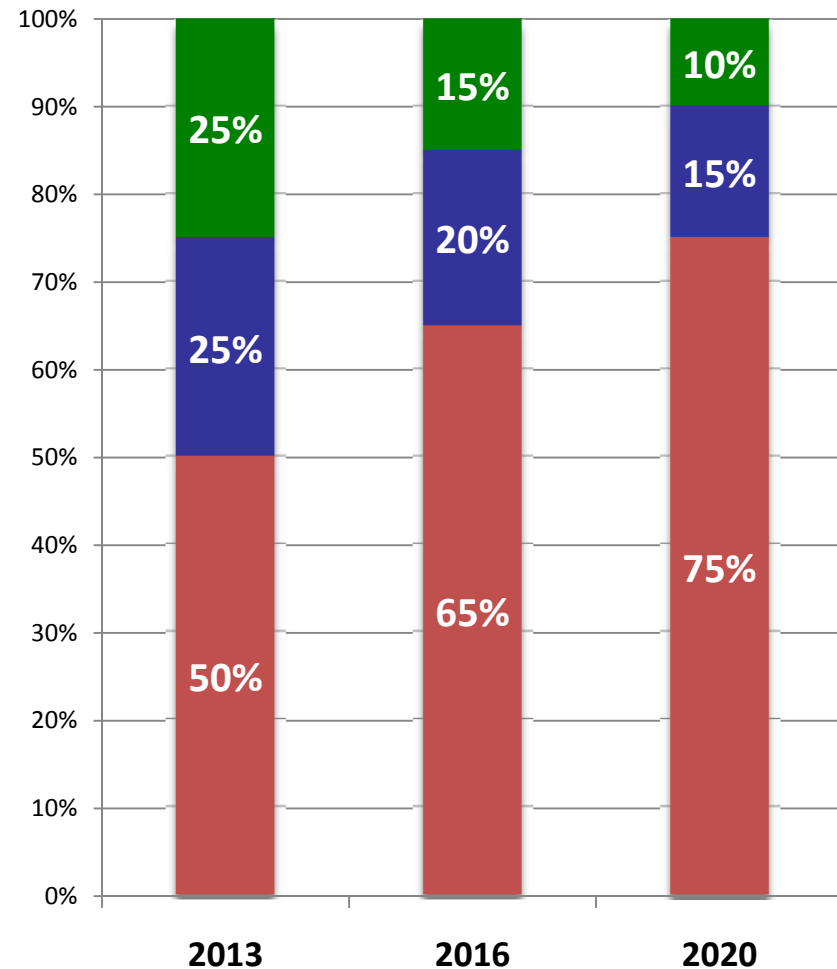
20%
Average
2011 - 2013

**Reasonable
Progress to
Ensure 25%**
by 12-31-16

**Reasonable
Progress to
Ensure 33%**
by 12-31-20



Portfolio Content Categories & Compliance Periods



Portfolio Content Category 3

- Eligible electricity products, including unbundled RECs, that do not qualify under categories #1 or #2.

Category 3. Maximum Procurement – no more than:

- 25% by 12/2013
- 15% by 12/2016
- 10% by 12/2020 and thereafter

Portfolio Content Category 2

- Provide firm and shaped electricity products providing incremental electricity and scheduled into a CBA.*

- **Category 2. No minimum or maximum procurement.**

Portfolio Content Category 1

- 1st point of interconnection with a CBA or distribution facility serving CA customers; or
- Schedule into CBA* without substituting electricity from another source; or
- Have agreement to dynamically transfer electricity to a CBA.*

Category 1: Minimum Procurement – at least:

- 50% by 12/2013
- 65% by 12/2016
- 75% by 12/2020 and thereafter

*CBA = California Balancing Authority



RPS Implementation - Agency Roles

CEC ROLE

- Certify renewable facilities as RPS eligible.
- **Design and implement an accounting system to track and verify RPS compliance.**
- Adopt regulations specifying the enforcement provisions for publicly-owned electric utilities in meeting the RPS.
- Issue a notice of violation and correction against a POU for not complying with the RPS.
- Refer the POU's violation to the California Air Resources Board for potential penalties.

CPUC ROLE

- Implement procurement and compliance rules for retail sellers.
- Review RPS procurement plans for retail sellers.
- Develop least-cost, best-fit process to evaluate bids to IOU solicitations.
- Standardize RPS contract terms.
- Approve/reject RPS contracts between IOUs and developers.
- **Determine RPS compliance and enforcement for retail sellers.**

Background for Presentation



Information presented today is based on:

- ✓ Requirements in SBX1- 2
- ✓ Draft POU Regulations & CPUC RPS Rulemaking 11-05-005
- ✓ RPS Eligibility Guidebook

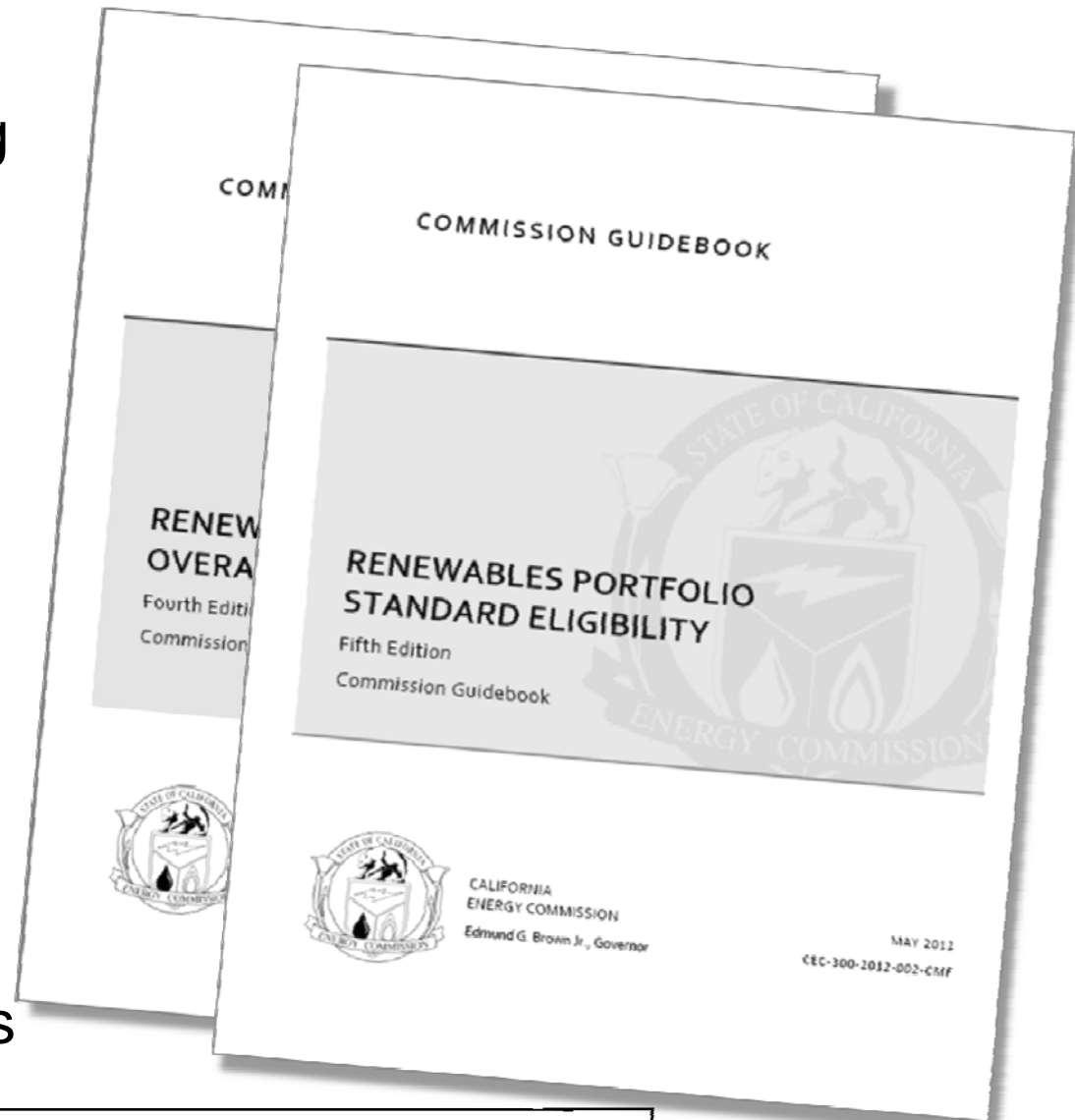
Note that the POU regulations are not final and the CPUC Rulemaking process is on-going.

This presentation and the discussion today are to help staff and parties to better participate in the development of the RPS Procurement Reporting and Verification section of the *Draft RPS Eligibility Guidebook, 7th edition*.



RPS Eligibility Guidebooks

- ✓ Describe eligibility requirements for certifying and precertifying renewable energy resources
- ✓ Describe reporting requirements and accounting system to verify RPS-eligible procurement.
- ✓ Provide applications, reporting forms, attestations, etc.
- ✓ Outline legal requirements
- ✓ Define terms



Up to 2010 - RPS Verification Reports



RPS Procurement Verification Reports through 2010 present the amount of RPS-eligible energy procured each year by electricity retail sellers towards meeting California's RPS.

RPS Procurement Verification Reports are transmitted to the CPUC to assist in determining compliance for retail sellers.

Staff is currently verifying years 2008-2010.

- ✓ *Draft 2008-2010 RPS Verification Report* – end of year 2012.
- ✓ *Final 2008-2010 RPS Verification Report* – 1st quarter 2013.

Retail sellers reported 2008-2010 RPS data in first half 2011.

2011 and Forward - RPS Verification Reports



For 2011 & forward, staff anticipates *Compliance Period RPS Procurement Verification Reports* – One for retail sellers and one for POU.

- ✓ Data reported, processed, and presented annually.
- ✓ The last year of the compliance period is expected to include data for all reported years in the compliance period.
- ✓ Reports transmitted to the CPUC for retail sellers and to the ARB for POU in noncompliance.

***All retail seller claims will be through WREGIS for years 2011 forward.
POUs must transition from the CEC-RPS-POU reporting form to
WREGIS by October 2012.***

Pre-2011 - Historic Carry-Over for 33% by 2020



The Energy Commission staff has proposed to verify historic carry over for POU's.

- ✓ POU's may only count historic carry-over from facilities that have been approved and certified as having met the RPS eligibility requirements in place when the original procurement/ownership agreement was executed to count procurement as historic carry-over.
- ✓ Original contract/ownership agreement was in place before June 1, 2010.

The CPUC is determining historic carry over amounts for retail sellers through the Closing Reports, in accordance with Rulemaking 11-05-005 Decisions (e.g. Decision 12-06-038).



“Portfolio Content Category 0” - Count in Full



- ✓ The renewable energy resource was eligible under the Energy Commission rules in place as of the date when the contract or ownership agreement was executed.
- ✓ The contract or ownership agreement was originally executed before June 1, 2010.
- ✓ For IOUs, if the contract was originally executed before June 1, 2010, even if CPUC approval occurs on or after June 1, 2010.
- ✓ Electricity products from contracts modified on or after June 1, 2010, may still qualify as “count in full” if the contract amendments or modifications do not increase the nameplate capacity or expected quantities of annual generation, or substitute a different renewable energy resource.
- ✓ The duration of the contract may be extended and still qualify as “count in full” if the original contract specified a procurement commitment of 15 or more years.



“PCC0” - Reporting & Verification

Staff’s preliminary expectations of PCC 0 procurement verification documentation are as follows:

Staff will need to make PCC 0 determinations based on contract reviews.

- ✓ CPUC staff will likely conduct this analysis for the retail sellers.
- ✓ Energy Commission staff will conduct this analysis for the POU’s.

Portfolio Content Category 1 - Criteria



Facility must meet one of the following criteria:

1. Have first point of interconnection to CA balancing authority (CBA).
 - California ISO; LADWP; BANC-formerly SMUD; IID; or TID
2. Have first point of interconnection to a distribution system to serve CBA end users.
3. Have generation scheduled into CBA.
4. Have dynamic transfer agreement with CBA.

Portfolio Content Category 1 - Requirements



In all cases electricity and REC must be procured bundled.

If a resale:

- ✓ must be for future generation and RECs only; and
- ✓ must otherwise meet the requirements of PCC 1.

PCC1: Minimum Procurement – at least:

- ✓ 50% by 12/2013
- ✓ 65% by 12/2016
- ✓ 75% by 12/2020 and thereafter

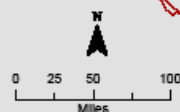
California Balancing Authorities & Utilities



Balancing Authority Areas



California Energy Commission
12/19/2011
681mg, Transmission and Environmental Protection Division
Cartography Unit
www.energy.ca.gov
To inquire about ordering this map or information on
other types of maps call the map line at (916) 654-4182 or
E-Mail: JGILBREA@ENERGY.STATE.CA.US
File: T:\Project\CEC\000000_Cardinal Area\013_01311000 Balancing Authority Areas 12_19_2011.mxd



California Electric Utility Service Areas



California Energy Commission
Systems Assessment & Facilities Siting Division
Cartography Unit
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PCC1 – Interconnected and Dynamic Transfer-Reporting & Verification



Staff's preliminary expectations of PCC1 procurement verification documentation are as follows:

Interconnected to CBA -

- ✓ copies of interconnection agreements.

Interconnected to a distribution system to serve CBA end users -

- ✓ copies of distribution system interconnection agreements.

Have dynamic transfer agreement with CBA -

- ✓ copies of dynamic transfer agreements.

Facilities that have generation scheduled into a CBA require substantially more verification documentation.

PCC1 - Scheduled into CBA - Legislative Requirements



- ✓ Facilities that are scheduled from the eligible renewable energy resource into a CBA may use another source to provide real-time ancillary services required to maintain an hourly or subhourly import schedule into a CBA, but only the fraction of the schedule actually generated by the eligible renewable energy resource shall count toward PCC 1.
- ✓ Legislation effectively requires an annual hourly analysis of meter and schedule data to determine what portion of the generation met the schedule, was under the schedule or was over the schedule.

Hourly analysis cannot be done in WREGIS, which provides monthly generation data in terms of MWh Certificates.

PCC1 – Scheduled into a CBA - Initial Verification Expectations



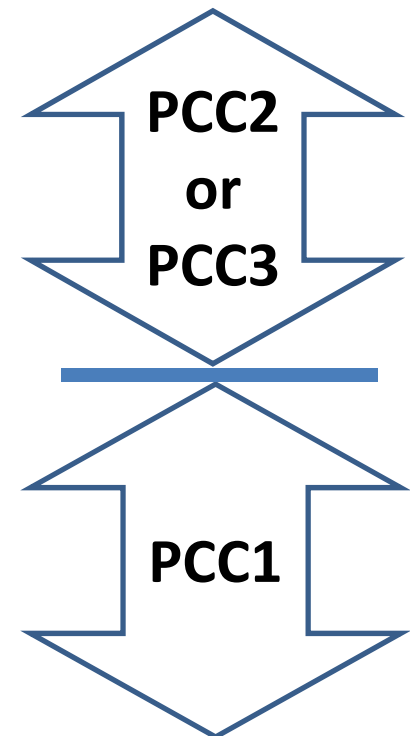
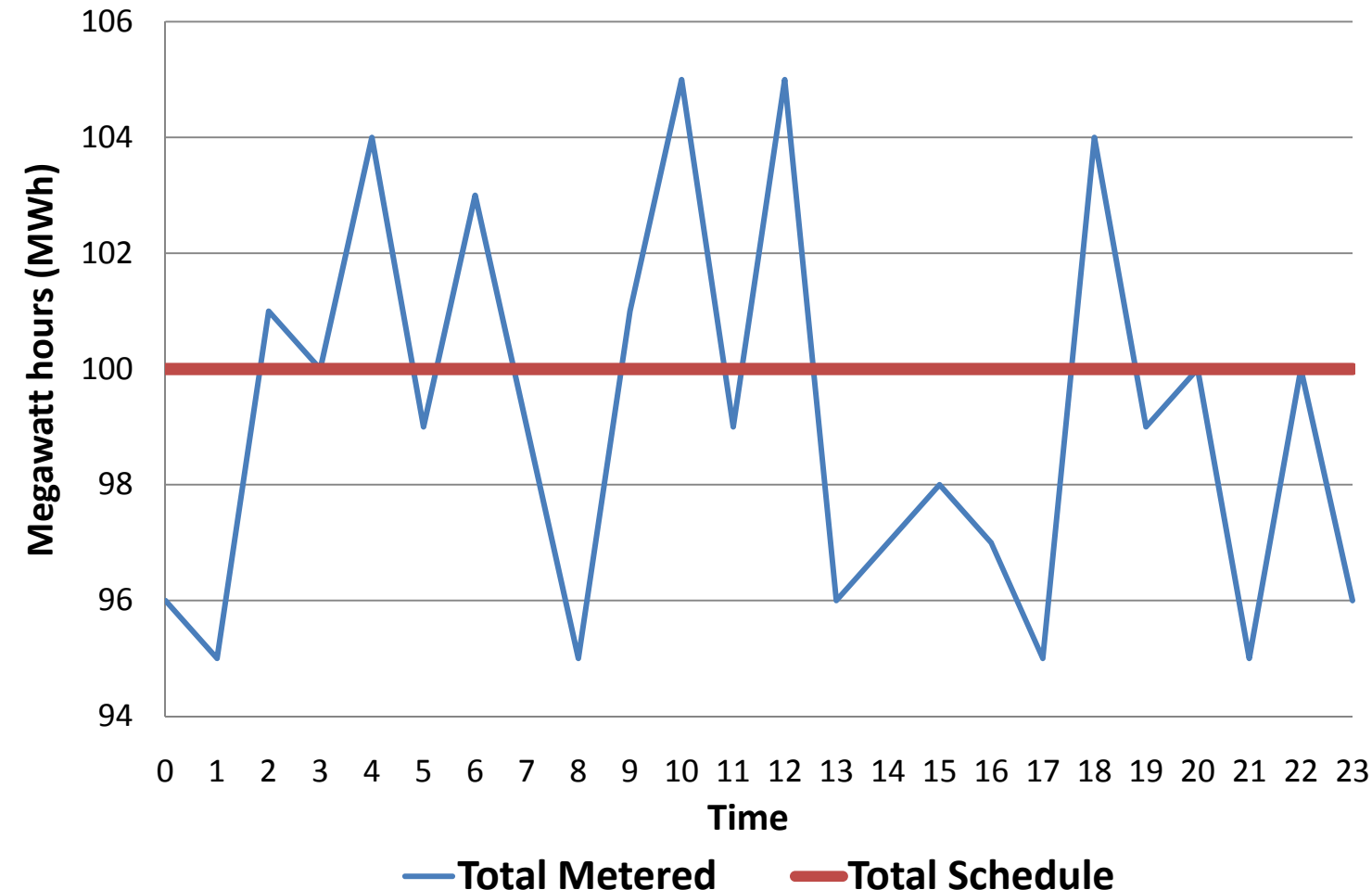
- ✓ The Energy Commission is gearing up to be able to analyze hourly data (8,760 hours in a year – must consider annual hourly metered and schedule data – at a minimum).
- ✓ Initially, staff intends to use one Access® database per CBA scheduled facility, ultimately transferring to a more robust verification system.
- ✓ WREGIS certificates will not be created for generation for ancillary services.
- ✓ WREGIS certificates will be created for all generation.
- ✓ Reporting and verification need to distinguish PCC1.



PCC1 – Scheduled into a CBA – lesser of...



The lesser of the schedule or the meter



PCC1 – Scheduled into a CBA

Hourly Analysis



Time	PCC Hourly Analysis (MWh)				
	SCHEDULE	ACTUAL	Difference	Bucket 1	Bucket 2/3
0:00	100	96	-4	96	0
1:00	100	95	-5	95	0
2:00	100	101	1	100	1
3:00	100	100	0	100	0
4:00	100	104	4	100	4
5:00	100	99	-1	99	0
6:00	100	103	3	100	3
7:00	100	99	-1	99	0
8:00	100	95	-5	95	0
9:00	100	101	1	100	1
10:00	100	105	5	100	5
11:00	100	99	-1	99	0
12:00	100	105	5	100	5
			TOTALS:	1283	19

PCC1 - Scheduled into a CBA - multiple LSEs



In the case where multiple LSEs procure from the same facility, the amount of PCC1 is likely to be determined on a percentage basis – unless there are other contractual arrangements in place.

For example:

- ✓ If LSE 1 procures 60% of the facility's total output – the amount of PCC1 allocated to LSE 1 would be 60% of each hourly PCC1.
- ✓ If LSE 2 procures the remaining 40% of the facility's total output – the amount of PCC1 allocated to LSE 2 would be 40% of each hourly PCC2.



PCC1 - Multiple LSEs - Hourly Analysis

Time	PCC Hourly Analysis (MWh)					
	SCHEDULE	ACTUAL	Difference	Bucket 1	LSE 1 - 60%	LSE 40%
0:00	100	96	-4	96	58	38
1:00	100	95	-5	95	57	38
2:00	100	101	1	100	60	40
3:00	100	100	0	100	60	40
4:00	100	104	4	100	60	40
5:00	100	99	-1	99	59	40
6:00	100	103	3	100	60	40
7:00	100	99	-1	99	59	40
8:00	100	95	-5	95	57	38
9:00	100	101	1	100	60	40
10:00	100	105	5	100	60	40
11:00	100	99	-1	99	59	40
12:00	100	105	5	100	60	40
TOTALS:				1283	769	514

WREGIS NERC e-Tag Summary Report



WREGIS NERC E-Tag Summary Report Information

NERC Tag ID

Start Date

Stop Date

Generator Name – THIS IS THE SOURCE, FIRST POINT OF RECEIPT (POR)

Load – THIS IS THE SINK, POINT OF DELIVERY (POD)

Load Control Area – BALANCING AREA of POR

Generator Control Area – BALANCING AREA of POD

Load Serving Entity PURCHASING SELLING ENTITY (PSE)

Total MWh on Tag

MWh Remaining for Retirement

Miscellaneous Field – Must include RPS_ID

PCC1 – Reporting and Verification



Staff's preliminary expectations of procurement verification documentation for claims from facilities scheduled into a CBA:

- ✓ WREGIS Compliance Reports & WREGIS NERC e-Tag Summary Report
- ✓ RPS Generator Name as Point of Receipt* & RPS ID in Misc Field.
- ✓ Delivery amount sufficient to cover monthly and annual amounts.

LSEs must be prepared to provide sufficient documentation to support PCC1 HOURLY claims. Could include:

- ✓ Copies of associated firm transmission arrangement.

An Auditable Package -

- ✓ Annual - Hourly Meter Data & Annual - Hourly Scheduled Data.
- ✓ NERC e-Tags – specified by staff and used to randomly verify hourly amounts claimed.
- ✓ Invoices and other supporting documentation, as necessary.

Portfolio Content Category 2 or 3



For generation above the schedule:

- ✓ Electricity products may be classified as PCC 2, as long as the PCC 2 requirements are met (requirements covered in following slides).
- ✓ Electricity products may be classified as PCC 3 (requirements covered in following slides).

PCC2 – Incremental Electricity & Scheduled into a CBA - Requirements



Firmed and shaped eligible renewable resource electricity products providing **incremental electricity and scheduled into a CBA.**

- ✓ Renewable energy is firmed and shaped with substitute energy
 - Substitute energy procured after RE procured
- ✓ Substitute energy is incremental to LSE
 - Not part of LSE's portfolio
- ✓ Both facilities' first point of interconnection is outside a CBA
- ✓ Substitute energy scheduled into CA BA
 - Scheduled in same calendar year as RE is generated
- ✓ Renewable energy may not be sold back to RPS facility
- ✓ If a resale, for future generation and RECs only, and otherwise meet the requirements of PCC 2

Portfolio Content Category 2 – Reporting & Verification



Staff's preliminary expectations of required procurement verification documentation for PCC2 claims:

- ✓ Substitute energy procured after RE procured (contract check)
- ✓ Substitute energy incremental to LSE (contract check)
- ✓ Facilities' first point of interconnection outside CBA (facility check)
- ✓ Substitute energy scheduled into CA BA in same calendar year as RE is generated – (WREGIS NERC e-Tag Summary Report and WREGIS Certificate vintage)
- ✓ Energy may not be sold back to RPS facility (attestations & contract check)
- ✓ If a resale, for future generation and RECs only, and otherwise meet the requirements of PCC 2 (contract checks).

PCC2 – Incremental Electricity & Scheduled into a CBA – E-Tags



- ✓ e-Tags are created when energy is scheduled to cross Balancing Authority Area boundaries and are used to track the physical path.
- ✓ e-Tags are pulled into WREGIS if the “RPS_ID” is on the Miscellaneous /Token Field line on the physical path of the e-Tag.
- ✓ In WREGIS, Account Holders can match e-Tags to the corresponding WREGIS Certificates to show that energy was delivered to CA.
- ✓ Retail Sellers submit NERC e-Tag Summary Reports, along with WREGIS Compliance Reports, which provide verification information included on e-Tags.



Eligible renewable energy resource electricity products, or any fraction of the electricity generated, including unbundled RECs, that do not qualify under the criteria of PCCs 1 or 2.

PCC 3 – maximum requirements toward RPS targets:

- ✓ First compliance period, no more than 25%
- ✓ Second compliance period, no more than 15%
- ✓ Third compliance period, no more than 10%

Staff's preliminary expectations of required procurement verification documentation for PCC3 –

- ✓ WREGIS Compliance Reports
 - ✓ *POUs may transition from CEC-RPS-POU reporting form to WREGIS. POU's must use only WREGIS starting October 2012*



SB X1-2 Reporting in WREGIS - No > than 36 months requirement

RPS Eligibility Guidebook will be updated to include WREGIS reporting instructions.

Staff anticipates annual reporting and one retirement subaccount in WREGIS for each PCC category. For example, in one year there could be four retirement subaccounts: (“YYYY” represents the reporting year)

- ✓ YYYY CA RPS PCC0
- ✓ YYYY CA RPS PCC1
- ✓ YYYY CA RPS PCC2
- ✓ YYYY CA RPS PCC3

SB X1 2 states that retirement must occur within 36 months from the initial date of generation of the associated electricity.

- ✓ Staff will check vintage month and year of WREGIS Certificates against retirement month and year to verify this requirement.

Verification of SB X1-2 Product Content Categories



Product Content Categories					Possible Documents Required to Verify					
PCC 1 – First point of interconnection to the WECC transmission grid within the metered boundaries CBA					Copy of Interconnection Agreement WREGIS Report – Compliance Report					
PCC 1 - First point of interconnection with the electricity distribution system used to serve end users within the metered boundaries of a CBA					Copy of Interconnection/Net Metering Agreement Invoice substantiating amount of AB 920 procurement WREGIS Report – Compliance Report					
PCC 1 – Scheduled directly into a CBA within the hour without using substitute energy. Ancillary services allowed to meet hourly or subhourly import schedule, but only renewable fraction of the schedule actually generated is RPS eligible.					WREGIS Report – Compliance Report WREGIS Report – NERC e-Tag Summary Report Auditable Package: Hourly Meter Data; Hourly scheduled data ; NERC e-Tags; Invoices, other data as necessary.					
PCC 1 - Scheduled into a California balancing authority pursuant to a dynamic transfer agreement					Copy of Dynamic Transfer Agreement WREGIS Report – Compliance Report					
PCC 2 –Firming and Shaping – incremental energy scheduled into a CA balancing authority					Contract date checks for RE and substitute energy contracts WREGIS Report – Compliance Report NERC e-Tag Summary Report, NERC e-Tags, etc.					
PCC 3 – Products not meeting PCC1 or PCC2 and Unbundled Renewable Energy Credit –					WREGIS Report – Compliance Report					

Submitting Written Public Comments



Comments are due by Monday, October 1, 2011.

For instructions on submitting comments, please refer to the Workshop Notice.

For More Information:

<http://www.energy.ca.gov/portfolio/notices/index.html>

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